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CTBT opens for signature in New York.
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The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear test explosions in any environment. It was negotiated and drafted at the Conference on Disarmament in Geneva and opened for signature in New York on 24 September 1996.

The Treaty builds on the work of preceding bilateral, regional and global arrangements, such as the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The CTBT aims at eliminating nuclear weapons by constraining the development and qualitative improvement of new types of nuclear weapons. It plays a crucial role in the prevention of nuclear proliferation and in nuclear disarmament, thus contributing to a safer and more secure world.

**Highlights of the Treaty**

The CTBT consists of a Preamble, 17 Articles, two Annexes and a Protocol with two Annexes. The goals and aspirations of the States who sign the Treaty are outlined in the Preamble, the basic obligations under the Treaty are set out in Article I. The establishment of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) in Vienna, Austria, which will consist of three organs - the Conference of the States Parties, the Executive Council and the Technical Secretariat - is provided for in Article II. The global verification regime to monitor compliance with Treaty provisions is described in Article IV and the Protocol.

The procedures for on-site inspections are set out in the Protocol Part II. Article XIV stipulates that a Conference can be held to accelerate the ratification process in order to facilitate the Treaty’s early entry into force, if the Treaty has not entered into force three years after the date of its opening for signature.

**Entry into Force**

The CTBT will enter into force 180 days after it has been ratified by the 44 States listed in Annex 2. These 44 States formally participated in the work of the 1996 Conference on Disarmament and possess nuclear reactors.

Once the Treaty enters into force, the global verification regime to monitor compliance with it must be operational and the first Conference of the States Parties will be convened. The Conference is the principal organ of the CTBTO and will be responsible for electing the members of the Executive Council, which will supervise the activities of the Technical Secretariat. In case of a non-compliance concern regarding the Treaty, the Executive Council shall consult with the States Parties involved and recommend measures to the Conference to redress the situation.

**Main Elements of the Verification Regime**

The Treaty provides for a comprehensive global verification regime, which consists of an International Monitoring System (IMS), consultation and clarification procedures, provisions for requesting on-site inspections, and confidence-building measures. The present verification regime is the result of many years of negotiations led by an international Group of Scientific Experts (GSE) at the Conference on Disarmament in Geneva to ensure that non-compliance with the provisions of the Treaty can be detected in a timely manner.

**International Monitoring System**

The 337 IMS monitoring facilities (170 seismic, 11 hydroacoustic, 60 infrasound, 80 radionuclide stations and 16 radionuclide laboratories) are located all over the world including in some of the most remote regions such as the Arctic and Antarctica. The seismic, hydroacoustic, infrasound and radionuclide monitoring technologies are designed to register sound and energy vibrations underground, in the sea and in the air, and to detect radionuclides released into the atmosphere.

**International Data Centre and Global Communications Infrastructure**

IMS data is collected and transmitted via the state-of-the-art, satellite-based Global Communications Infrastructure (GCI) to the International Data Centre (IDC) at the Commission’s headquarters in Vienna. Here the data are processed and, together with IDC products such as Reviewed Event Bulletins and other event screening services, released to Member States for final analysis.

**On-Site Inspections**

If the collected and analyzed data indicate an ambiguous event, States may address concerns about possible non-compliance with the Treaty through a consultation and clarification process. Notwithstanding this process, States may request an on-site inspection (OSI). An OSI clarifies whether a nuclear explosion has been carried out in violation of the Treaty and gathers facts which might assist in identifying a possible violator. An OSI is provided for in the Treaty as a final verification measure, which may be requested by any State Party once the Treaty has entered into force.

**Verifiability of the Treaty**

The IMS network was designed by the GSE to be fully capable of monitoring compliance with the Treaty. The IMS, with its associated communications infrastructure and the IDC, is capable of detecting nuclear explosions of very low yield detonated in any environment on Earth. The event in the Democratic People's Republic of Korea on 9 October 2006 represented a real-life test case for the system. Although completed only partially and operating in test mode, the system proved that it was capable to meet the expectations set for it.

As the installation of the IMS progresses, new research and improved communications technology strengthens and refines its detection capacities. National technical means of verification offer an additional source of data that can be used to detect nuclear explosions, or to support an on-site inspection request, as set out in the Treaty. The prospect of detection, combined with high political costs and the possibility of an OSI, will make attempts to evade the Treaty extremely difficult.

**Membership Benefits**

Member States have a number of advantages in the political field, such as contributing to regional and international peace and security and joining a community of like-minded States, which facilitates information-sharing and participation in various forms of international cooperation.

Member States may also make use of a range of technologies used in collecting, transmitting, processing and analyzing verification-related data. The Commission can assist in the establishment of national data centres (NDCs) and provide access to the Experts Communication System (ECS). Member States may also benefit from the utilization of verification regime data in a variety of civil areas, including scientific research, disaster preparedness and meteorological and climate forecasting, such as tsunami warning.
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OBJECTIVES AND ACTIVITIES

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